

CLAIMS

Please enter the following amendments to the subject application.

1. **(Currently Amended)** A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate wherein a feature location of said feature locations comprises degenerate biopolymers comprising nucleotides, said method comprising:
producing a mixture of two or more different biopolymer subunit precursors; and
~~producing a degenerate biopolymer feature location on said surface of said substrate by a method comprising providing a mixture of two or more different biopolymer subunit precursors~~ providing said mixture to [[said]] a predetermined feature location on said surface of said substrate in ~~at least one~~ a round of multiple rounds of subunit additions to produce the feature location comprising degenerate biopolymers.
2. **(Previously Presented)** A method according to claim 1 wherein said biopolymers are polynucleotides.
3. **(Currently Amended)** A method according to claim 1 wherein said ~~degenerate biopolymer feature comprises~~ degenerate biopolymers [[that]] comprise a contiguous stretch of 1 to 5 degenerate nucleotides.
4. **(Currently Amended)** A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate wherein a feature location of said feature locations comprises degenerate biopolymers comprising nucleotides, said method comprising[[[:]], in each round of multiple rounds of subunit additions, providing biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, wherein, for the feature location comprising said degenerate biopolymers, said biopolymer subunit precursors for a round of said multiple rounds are provided as a mixture of two or more different biopolymer subunit precursors for forming said

degenerate biopolymers, each round of subunit additions comprising

producing a degenerate biopolymer feature location on said surface of said substrate by a method comprising:

— providing a mixture of two or more different biopolymer subunit precursors to said feature location in at least one round of multiple rounds of subunit additions, each round of subunit additions comprising:

(a) dispensing from a dispensing system said biopolymer subunit precursors to said discrete sites **predetermined feature locations**,

(b) dispensing activator to said discrete sites **predetermined feature locations**, and

(c) repeating steps (a) - (b).

5. (Previously Presented) A method according to claim 4 wherein said biopolymers are polynucleotides.

6. **(Currently Amended)** A method according to claim 4 wherein said ~~degenerate biopolymer feature comprises~~ degenerate biopolymers ~~[[that]]~~ comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

7. (Original) A method according to claim 4 wherein said biopolymers are oligonucleotides.

8. (Original) A method according to claim 4 wherein said dispensing system comprises at least one droplet dispensing device.

9. (Original) A method according to claim 4, which is a computer based method wherein steps (a) through (c) are carried out under computer control.

Claims 10-32 (cancelled).

33. **(Currently Amended)** A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate, **wherein a feature location of said feature locations comprises**

degenerate biopolymers comprising nucleotides, said method comprising, in each round of multiple rounds of subunit additions, providing biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, wherein, for the feature location comprising said degenerate biopolymers, said biopolymer subunit precursors for a round of said multiple rounds are provided as a mixture comprising a predetermined ratio of two or more different biopolymer subunit precursors for forming said degenerate biopolymers, each round of subunit additions comprising [:-]]

producing a degenerate biopolymer feature location on said surface of said substrate by a method comprising:

(a) dispensing from a dispensing system in at least one round of multiple rounds of subunit additions a mixture comprising a predetermined ratio of two or more different said biopolymer subunit precursors to said predetermined feature locations for forming said degenerate biopolymers in a droplet manner,

(b) dispensing activator to said ~~discrete sites~~ predetermined feature locations, and

(c) repeating steps (a) – (b) to form said plurality of biopolymers comprising nucleotides at predetermined feature locations on said surface.

34. (Previously presented) A method according to Claim 33 wherein said biopolymers are polynucleotides.

35. **(Currently Amended)** A method according to Claim 33 wherein said ~~degenerate biopolymer feature comprises~~ degenerate biopolymers ~~[[that]]~~ comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

36. (Previously Presented) A method according to Claim 33 wherein said biopolymers are oligonucleotides.

37. (Previously presented) A method according to Claim 33 wherein said dispensing system comprises at least one droplet dispensing device.

38. (Previously presented) A method according to Claim 33, which is a computer based method wherein steps (a) through (c) are carried out under computer control.
39. (Previously Presented) The method of Claim 1, wherein said biopolymer subunit precursors are nucleotide precursors.
40. (Previously Presented) The method of Claim 39, wherein said mixture of different biopolymer subunit precursors comprises nucleotide precursors corresponding to C, G, A and T.
41. (Previously Presented) The method of Claim 1, wherein said biopolymer subunit precursors are monomers.
42. (Previously Presented) The method of Claim 4, wherein said biopolymer subunit precursors are nucleotide precursors.
43. (Previously Presented) The method of Claim 42, wherein said mixture of different biopolymer subunit precursors comprises nucleotide precursors corresponding to C, G, A and T.
44. (Previously Presented) The method of Claim 4, wherein said biopolymer subunit precursors are monomers.
45. (Previously Presented) The method of Claim 33, wherein said biopolymer subunit precursors are nucleotide precursors.
46. (Previously Presented) The method of Claim 45, wherein said mixture comprising a predetermined ratio of different biopolymer subunit precursors comprises nucleotide precursors corresponding to C, G, A and T.
47. (Previously Presented) The method of Claim 33, wherein said biopolymer subunit precursors are monomers.

48. (Previously Presented) The method of Claim 1, wherein said degenerate biopolymer feature location comprises degenerate biopolymers having less than 10 sites of degeneracy.
49. (New) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate, wherein a feature location of said feature locations comprises degenerate biopolymers comprising nucleotides, said method comprising, in each round of multiple rounds of subunit additions, providing biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, wherein, for the feature location comprising said degenerate biopolymers, said biopolymer subunit precursors for a round of said multiple rounds are provided as a mixture of two or more different biopolymer subunit precursors for forming said degenerate biopolymers.
50. (New) The method of Claim 8, wherein said droplet dispensing device comprises a reservoir comprising said mixture.
51. (New) The method of Claim 37, wherein said droplet dispensing device comprises a reservoir comprising said mixture.